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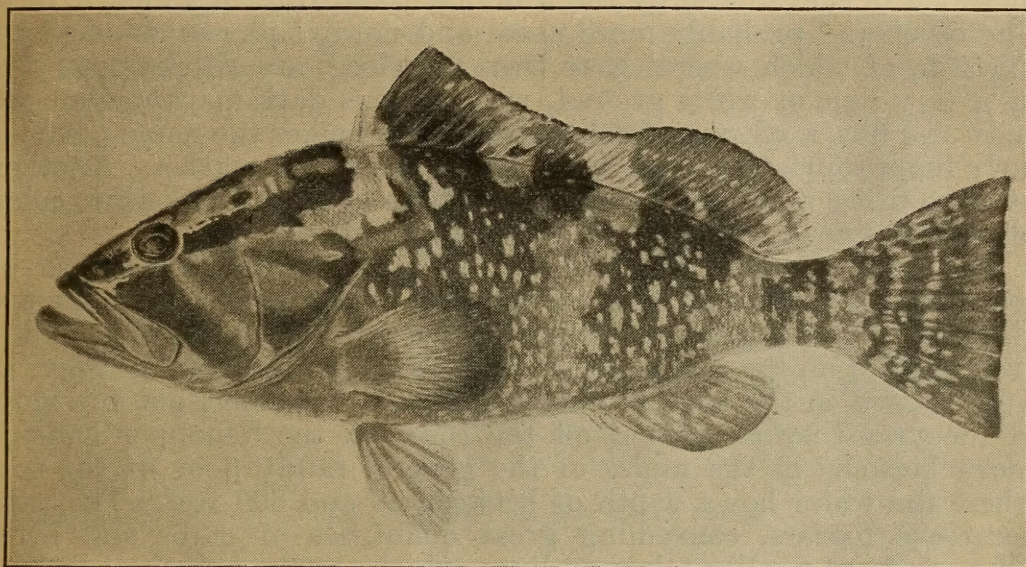
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BUREAU OF FISHERIES

Economic Circular No. 44 : : : : : : : ; : : : : : : Issued March 21, 1919

With recipes for cooking them.



But there are other color changes which apparently have little or no relation to camouflage. We are all familiar with the changes of the human face under the stress of emotions, the flush of anger, the blush of shame or embarrassment, and the pallor of fear; but it is not generally known that in fishes there is a much more vivid and extraordinary play of color correlated with varying moods and emotions. There are color patterns characteristic of fear or alarm, of

^a By H. F. Moore, Deputy Commissioner, Bureau of Fisheries.

Monograph
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anger or belligerency, of rest and play, and in some fishes these phases differ from one another so markedly that the uninitiated would be warranted in believing them to characterize distinct species, and not mere "states of mind" of the individual.

Studies conducted at the New York Aquarium have shown these changes to be particularly rapid in the fishes of the Tropics, many of which are vivid and fantastic in coloration. Among the species studied there is the black grouper, and it is interesting that the mottled, dusky-brown color which suggested its popular name is that which the fish assumes when it is frightened, the only mental state in which it is ever seen by the fishermen, and that in which it dies. The other and probably more usual and normal phases assumed by this fish, of which several have been described, are all characterized by a very pale or white ground, with various dark markings on the body and fins, a scheme of coloration which makes the name particularly inappropriate, except as the fish comes to the market. Another of these fishes is the red grouper, of which at least six distinct color phases are known, some of which are not at all red.

The name grouper which these and other related fishes bear in common is a perversion of the Portuguese name garoupa. They are all fishes of warm seas and abound particularly in the Tropics. They are plentiful on the east coast of Florida and in the Gulf of Mexico. They spawn in the bays in spring and early summer, but for most of the year they are found off the coast on the "snapper banks," rocky bottoms in the midst of the general sandy floor of the sea, where the water has a depth of between 50 and 300 feet. They are voracious feeders, consuming great quantities of crabs and little fishes, and are readily taken on lines, which are the principal instruments of the fishery. These fish attain a weight of 50 pounds, but are usually much smaller.

Red snappers, with which they are associated on the banks, are well known in the markets, but the groupers are fully appreciated only on their native shores. Quantities of them are carried alive from Florida to Cuba in smacks provided with "wells" or compartments communicating with the sea, and the fishermen for their own food prefer them to most other species. Their flesh is firm and white. They keep well and stand shipment for long distances, and their excellence and abundance induce the Bureau of Fisheries to commend them to consumers.

Groupers are usually shipped gutted and headless, which saves on transportation charges and by so much reduces the price to the consumer. The retailer should remove the fins and skin the fish for his customers. These operations can be quickly performed as follows:

Lay the fish on its side, with the head end pointing toward you and the back toward the knife hand (the hand with which the operator uses the knife). Insert the knife to a depth of 1 to 1½ inches behind the end of the back fin and draw the length of the fish, cutting close to the fin, thus severing the skin and the flesh from tail to head.

Turn the fish end for end, laying it on its other side, and repeat as above, drawing the knife along the length of the fin from the head to the tail. Using a piece of burlap to prevent the hand slipping, or a pair of pliers, catch the back fin at the front end and pull it out.

Turn the fish, tail pointing from you and the belly toward the knife hand. Grasp the pectoral fin, the fin just back of the gills, in the free hand and thrust the knife into the fish just back of it and cut both ways. The collar bone, which is thus cut loose, is removed by pulling on the fin. The small, thin bone remaining, which connects the hide and meat, is removed with a stroke of the knife. Repeat the operation on the other side.

Turn the fish, tail pointing toward you and the belly toward the knife hand. Complete the splitting of the fish, and remove the belly fins. With pliers or a piece of burlap catch the corner of the hide at the head end nearest the back and strip off by pulling toward the tail. Repeat the process for the other side and complete the removal of the skin and tail by a stroke of the cleaver at the base of the tail fin.

RECIPES.^a

FRESH GROUPER.

1. QUICK-OVEN METHOD—AN IMPROVEMENT ON FRYING.

Cut the grouper into portion-sized pieces, after removing bones and skin. Prepare a shallow bowl of salted milk ($\frac{1}{2}$ teaspoon salt to 1 cup milk) and also a plate of finely sifted bread crumbs. Dip the fish first into the salted milk and then into the dry crumbs. Place in a greased pan and sprinkle a little melted shortening or oil over the surface and bake in a very quick oven for 10 or 15 minutes, depending on the thickness of the slices. When baked to a deep golden brown remove from the pan to a hot platter, garnish with parsley, and serve with tartar sauce.

This method saves fat and labor and gives a better result.

2. BOILED GROUPER.

2 quarts of boiling water,	2 slices of onion,
$\frac{1}{4}$ cup vinegar,	1 teaspoon of salt.
$\frac{1}{2}$ bay leaf,	

Clean and bone the grouper; cut into pieces or leave whole, and place in cheesecloth. Boil the above ingredients together for 5 minutes and then lower the fish into it. Cook in a covered pan until the flesh is tender and the skin separates from it. Then remove and slip out of the cheesecloth into a hot platter. Serve whole with lemon butter, parsley, or tomato sauce. If boiled in small portions, it may be flaked and used the same as steamed grouper in various combinations.

3. STEAMED GROUPER.

2 quarts of boiling water,	2 stalks of celery (including leaves),
$\frac{1}{2}$ cup vinegar,	1 bay leaf,
2 slices of lemon,	1 teaspoon salt.

Clean the grouper and cut up into suitable pieces for the steamer. Boil the above ingredients until steaming; then grease the top pan and place the fish in it. Sprinkle each piece liberally with salt and steam for 20 minutes. Then remove from the steamer, cool, and flake, freeing it from skin and bones. Reheat in any fish sauce or use in some of the recipes which follow calling for cooked fish.

4. SAVORY GROUPER.

2 cups mediumly fine crumbs,	1 teaspoon mixed poultry spice,
1 onion, minced,	2 tablespoons melted shortening,
1 lemon rind, grated,	Salt,
1 tablespoon, lemon juice,	Pepper.

Prepare a stuffing from the above ingredients, mixing them all thoroughly. If the shortening does not give enough moisture to hold the mixture together,

^a Prepared by Miss Evelyn Spencer, Bureau of Fisheries.

add 1 or 2 tablespoons of hot water. Clean, bone, and skin the grouper, and cut into thick slices. Place the slices in a greased pan and sprinkle the stuffing thickly over the surface. Bake for 15 minutes in a moderate oven until the fish is tender and the stuffing browned. Serve plain or with tartar sauce.

5. IRISH GROUPE EN CASSEROE.

1 large onion, finely chopped,	$\frac{1}{2}$ teaspoon salt,
1 small bunch of celery, chopped,	$\frac{1}{8}$ teaspoon pepper,
1 tablespoon lemon juice,	1 tablespoon finely chopped parsley.

Thoroughly grease a ramekin and cover the bottom with the onion, celery, lemon juice, and seasoning. Clean, skin, and bone a piece of grouper, roast size, and put it on top of the vegetables. Sprinkle bread crumbs mixed with salt and a little shortening over the top of the fish. Bake for 20 minutes in a moderate oven, when the fish should be tender and the crumbs browned. Lift the fish onto a hot platter, put the cooked onion and celery around it, and sprinkle the parsley over the top. Serve with a brown sauce in which 1 minced onion has been cooked.

6. PICKLED GROUPE.

1 cup of oil,	$\frac{1}{2}$ teaspoon of paprika,
$\frac{1}{2}$ cup vinegar,	2 bay leaves,
4 slices of lemon,	$\frac{1}{8}$ teaspoon powdered cloves,
1 teaspoon salt,	$\frac{1}{8}$ teaspoon celery salt.

Cut fillets of grouper into strips 2 inches wide, and tie in rolls to prevent falling apart in cooking. Allow the rolls to simmer gently for 15 minutes in spiced, acidulated water used for steaming grouper. Lift out carefully and remove the strings. Place in a crock or deep bowl and pour over the above ingredients which have been thoroughly mixed. Allow the fish to remain in this pickle for 24 hours before using. Then it may be used as a filling for sandwiches, either plain or in combination with dressing and vegetables, or on crackers, for salads, or in canapes. Any boiled or steamed left-over fish may be preserved in this manner.

7. PLANKED GROUPE.

Bone a medium-sized grouper and lay it open, flat on a greased plank, skin side down. Sprinkle the top surface with melted shortening or oil and place in a very hot oven for 5 minutes. Remove. Sprinkle it with oiled bread crumbs. Form nests of mashed potatoes around the fish, and fill these nests with canned green peas, cooked carrots, or beets, diced. Stuff tomatoes, green peppers, turnips, or onions, and put between the potato nests. Return the plank to a moderate oven and bake until the potatoes are browned and the fish and vegetables are tender. If peppers, turnips, or onions are used, they should be par-boiled before being stuffed. Sprinkle the surface of the fish with chopped parsley, and serve from the plank at the table.

8. GROUPE ROLLS.

$\frac{1}{2}$ cup rolled cracker crumbs,	1 tablespoon chopped parsley,
1 tablespoon minced onion,	2 tablespoons melted shortening,
1 teaspoon Worcestershire sauce,	Salt,
1 teaspoon lemon juice,	Pepper.

Mix all the above ingredients together thoroughly, and add 1 tablespoon of hot water if more moisture is necessary to bind stuffing together. Clean, skin, and bone the grouper, and cut into strips 2 inches wide by 4 inches long. Spread the prepared stuffing evenly on each strip of fish, or roll, and tie securely to prevent stuffing from coming out. Prepare a savory brown sauce and place the little rolls on end in it. Simmer gently, occasionally turning to cook all sides, until the fish is tender. Remove strings from the rolls and pour the sauce around them. A few cooked carrots or beets may be placed on top of each roll as a garnish.

9. STUFFED BAKED GROUPE.

Have $\frac{1}{2}$ of a large grouper cut through the center for its entire length, so that with the slit down one side the middle will be suitable for stuffing. Carefully loosen the side bones and then cut them off close to the backbone, which

should be left in that back side is entirely closed. Cleanse the fish, but do not skin. Prepare a savory stuffing, using stale bread crumbs, minced onion, lemon juice, salt, pepper, and enough melted shortening to slightly moisten. Fill the center of the fish with the stuffing, and sew up the opening. Place in a greased baking dish and brush over the skin with melted shortening. Put in a hot oven, and after 10 minutes reduce the heat until the oven is moderate. Bake for 40 minutes. Then place on a hot platter and carefully remove the skin. Sprinkle the surface with chopped parsley and serve with tomato sauce.

10. GROUPEL SPANISH.

1 can tomatoes,	$\frac{1}{2}$ teaspoon Worcestershire sauce,
1 green pepper cut into thin strips,	2 tablespoons flour,
$\frac{1}{2}$ onion, chopped,	2 tablespoons shortening,
1 teaspoon sugar,	Salt and pepper.

Make a sauce of the tomato juice, flour, and shortening; add the onion and green peppers and the seasonings. Clean, bone, and skin the grouper. Cut it into cubes, and add to the tomato sauce. Simmer gently for $\frac{1}{2}$ hour and serve plain or with a border of boiled rice.

11. GROUPEL STEW.

3 fillets of grouper,	1 onion,
1 bunch of celery.	2 carrots.
2 green peppers,	

Cut grouper into 1-inch squares and dip them into flour and sauté until brown in a small amount of fat. Cut carrots, peppers, and celery into dice, and chop the onion and put into a pan with enough fat to prevent burning. Stir constantly until the juices are flowing and the vegetables are very slightly browned; cover with boiling water, add salt and pepper, and simmer for 10 minutes. Then add the fish cubes and thicken the gravy with 1 tablespoon of flour mixed to a smooth paste with cold water. Simmer together until the fish and vegetables are tender. Then add a few drops of lemon juice. Serve with a border of steamed rice.

12. GROUPEL CURRY.

2 onions, chopped,	1 teaspoon lemon juice,
4 large stalks of celery, chopped,	2 fillets of grouper,
1 sliced green pepper,	$\frac{1}{2}$ teaspoon curry powder,
2 tablespoons shortening,	Salt and pepper.

Melt the shortening and add the chopped vegetables; stir constantly to prevent burning. Cook until only slightly brown. Then pour on enough boiling water to cover them, and simmer gently for 10 minutes. Cut fillets of grouper into small squares, roll in flour, and sauté until browned. Then add to the vegetables with the curry powder and seasonings. There should be enough gravy to half cover the fish. Thicken by adding 1 tablespoon of flour mixed to a paste with cold water. Serve with a border of steamed rice.

13. GROUPEL PIE (I).

2 cups brown sauce,	2 cups mashed potatoes,
$\frac{1}{2}$ onion, minced fine,	Salt,
1 teaspoon Worcestershire sauce,	Pepper.

Cut thick fillets of grouper into small cubes; sprinkle with flour and put into a frying pan with enough shortening to prevent burning. When delicately browned, remove and add to the brown sauce onion and seasonings. Pour into deep pie pan and place a smooth layer of mashed potatoes on top, making slits for the steam to escape. Brush over the top with beaten egg and bake until delicately browned.

14. GROUPEL PIE (II).

1 cup flaked steam grouper,	1 tablespoon chopped green pepper,
1 cup tomato sauce,	1 tablespoon chopped parsley,
1 teaspoon lemon juice,	$\frac{1}{2}$ tablespoon chopped onion,
$\frac{1}{2}$ teaspoon Worcestershire sauce,	Salt and pepper.

Mix the fish, sauce, and seasonings thoroughly. Pour into a deep pie pan which has been lined with a smooth layer of mashed potato. With a pastry

bag pipe on the top crust of potatoes, shaping it in winding loops which come to a slight mound in the center. Bake until the potatoes are well browned.

15. GROUPEL MOLDS WITH ANCHOVY SAUCE.

1 cup brown sauce,	1 tablespoon lemon juice,
1 tablespoon minced onion,	1 egg slightly beaten,
$\frac{1}{2}$ grated lemon rind,	Bread crumbs.

Chop fillets of grouper into small pieces and add to the brown sauce with the seasonings. Remove from fire and slightly cool, and then add the egg. Grease little molds thoroughly and sprinkle bottom and sides with fine crumbs. Pour in the grouper mixture and sprinkle oiled crumbs on top. Bake in a moderate oven until the mixture is firm and the crumbs browned. Slip from the molds and serve with anchovy sauce.

PREVIOUSLY COOKED OR LEFT-OVER GROUPEL.

16. CREAMED GROUPEL.

2 cups flaked steamed or boiled grouper,	2 tablespoons shortening,
2 cups milk,	$\frac{1}{2}$ teaspoon lemon juice,
4 tablespoons flour,	$\frac{1}{2}$ teaspoon salt,
	Paprika.

Melt the shortening, stir in the flour, and mix to a smooth paste. Then pour on the heated milk. Cook for 5 minutes, then add the fish and seasoning. Cook until the fish is thoroughly heated. Pour onto a hot platter on which have been placed 4 to 6 halves of buttered toast. Sprinkle over the surface with paprika and garnish with parsley. Serve immediately.

17. SCALLOPED GROUPEL.

2 cups flaked steam grouper,	$\frac{1}{2}$ lemon rind, grated,
1 cup white, brown, or tomato sauce,	Salt,
1 teaspoon lemon juice,	Pepper.

Mix the fish and sauce thoroughly, and add the seasonings. Place in a greased baking dish with a layer of oiled crumbs in the center and on top. Bake in a quick oven until the crumbs are a golden brown.

18. GROUPEL SOUFFLE.

1 cup flaked steamed grouper,	1 teaspoon lemon juice,
1 cup milk,	2 egg whites,
3 tablespoons flour,	Salt,
2 tablespoons shortening,	Pepper.

Make a white sauce of the milk, flour, shortening, and seasonings; stir in the flaked fish; remove from the fire and cool. Beat the egg whites until stiff and dry and fold into the cooled fish mixture. Pour into greased molds, filling only $\frac{2}{3}$ full. Place the molds in a pan of hot water and bake in a moderate oven until the mixture is well puffed up and firm. Turn out and serve immediately.

19. DEVILED GROUPEL.

1 cup steamed flaked grouper,	1 tablespoon Worcestershire sauce,
1 cup milk,	1 tablespoon lemon juice,
1 tablespoon flour,	1 tablespoon chopped green pepper,
1 tablespoon shortening,	1 tablespoon chopped celery,
1 egg,	Bread crumbs,
2 tablespoons minced onion,	Salt,
2 tablespoons finely chopped parsley,	Pepper.

Make a white sauce of the milk, flour, and shortening. Add the chopped vegetables and cook for 5 minutes. Add the fish and mix thoroughly. Remove from the fire. Add the egg slightly beaten and the seasonings. Pour into shells or small ramekins, and sprinkle buttered or oiled crumbs over the top. Bake until the crumbs are a golden brown. Serve with tartar sauce.

20. CROQUETTES OF GROUPER.

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| 1 cup flaked steamed fish, | 1 teaspoon Worcestershire sauce, |
| $\frac{1}{2}$ cup thick white sauce, | 1 tablespoon lemon juice, |
| 1 tablespoon chopped, slightly cooked onion, | Finely sifted bread crumbs, |
| 1 tablespoon chopped parsley, | Salt and pepper. |

Mix cooled white sauce and fish, add remaining ingredients, and blend thoroughly. Pour the mixture into a shallow pan and allow to cool. Then shape into croquettes, dip into slightly beaten egg; then into fine crumbs. Fry in deep fat and drain on brown paper. Serve with tomato or tartar sauce.

21. GROUPER CHOPS.

Use the above mixture and shape into chops or cutlets. Sprinkle each side with fine crumbs and place in a well-greased pan. Sprinkle melted shortening over the top and bake for 10 minutes in a quick oven until a golden brown. Serve with caper or tartar sauce.

22. GROUPER WIGGLE.

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| 1 cup steamed flaked fish, | 1 can small peas, |
| 2 cups milk, | 1 teaspoon lemon juice, |
| 4 tablespoons flour, | 1 teaspoon anchovy essence, |
| 2 tablespoons butter. | Salt and pepper. |

Make a white sauce of the milk, flour, and butter. Add anchovy essence and seasonings. Mix thoroughly, and add the flaked fish and then the green peas. When heated through, serve on toasted crackers with a little ring of finely chopped parsley in the center.

23. GROUPER LOAF WITH BROWN PARSLEY SAUCE.

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| 2 cups flaked grouper, | <i>Sauce.</i> |
| 1 cup brown sauce, | |
| 2 tablespoons minced onion, | 2 tablespoons shortening, |
| 1 egg, slightly beaten, | 2 tablespoons flour, |
| $\frac{1}{2}$ cup soft bread crumbs, | 1 cup milk or fish stock, |
| 1 teaspoon Worcestershire sauce, | 1 teaspoon lemon juice, |
| 2 tablespoons shortening, | 2 tablespoons chopped parsley, |
| Salt and pepper. | Salt and pepper. |

Mix grouper, sauce, seasoning, egg, and crumbs. Shape into a loaf. Sprinkle a little flour over the top and place in greased pan. Bake $\frac{1}{2}$ hour and baste twice with fat during the cooking. Place on a hot platter and serve with the following sauce:

Sauce.—Melt the shortening. Add flour and stir constantly until well browned. Pour on the hot liquid. Add the seasonings, and when thickened remove from the fire and add the parsley.

24. GROUPER TIMBALS.

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| 1 cup diced steamed fish, | $\frac{1}{2}$ teaspoon Worcestershire sauce, |
| $1\frac{1}{2}$ cups thick white sauce, | Salt and pepper, |
| 2 tablespoons grated cheese, | Boiled rice. |

Line greased ramekins with the boiled rice, which has been well seasoned. Fill the center with the fish, which has been well blended with sauce and seasonings. Pack filling in tightly and place ramekins in a moderate oven. Bake until firm and then slip out of the ramekins. Sprinkle grated cheese on top and serve with tomato sauce.

25. GROUPER SALAD (No. I).

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| 1 cup steamed flaked grouper, | 2 tablespoons oil, |
| 1 cup diced celery, | $1\frac{1}{2}$ tablespoons lemon juice, |
| 2 tablespoons chopped sour pickle, | Salt and pepper. |

Mix the grouper, celery, and pickle together and pour over the mixture the oil and lemon juice. Allow to stand $\frac{1}{2}$ hour. Then add seasoning and 2 tablespoons of mayonnaise. Serve on lettuce with strips of pimento for garnish.



26. GROUPER SALAD

$\frac{1}{2}$ cup diced celery,
2 tablespoons chopped green pepper,
1 tablespoon chopped parsley,
2 tablespoons chopped green olives,

1 cup flaked steamed grouper,
 $\frac{1}{2}$ cup mayonnaise,
1 tablespoon lemon juice,
Salt and paprika.

Boil 6 medium-sized beets. Skin and scoop out the centers. Mix together the fish and vegetables with the mayonnaise and seasonings for the salad. Allow to stand 15 minutes. Then fill the beet cups. Pile salad filling so that it comes above the rims of the cups in the form of little pyramids. Place a small portion of thick mayonnaise on the top and press the tip of a green olive into the center. Place beet cups on lettuce leaves and serve.

This filling may be used for stuffing green peppers, when pimento should be substituted for the green peppers in the salad.

27. GROUPER SHORT CAKE.

1 cup flaked steamed grouper,
2 cups milk,
2 tablespoons flour,
2 tablespoons shortening,
1 teaspoon anchovy essence,

1 green pepper, chopped,
1 teaspoon Worcestershire sauce,
Salt,
Pepper,
4 large baking-powder biscuits.

Make a white sauce of the milk, flour, and shortening. Add the anchovy essence and the seasonings. Stir in the grouper, and when the mixture is hot split open the biscuits and pour part of it over the lower halves. Put on the tops and pour over the remaining fish mixture. Sprinkle grated cheese over the surface and place in a hot oven just long enough to melt the cheese. Serve immediately.

28. GROUPER PIMENTO CREAM.

2 cups flaked steamed grouper,
2 cups milk,
4 tablespoons flour,
2 tablespoons shortening,

2 canned pimentos,
2 egg whites,
Bread crumbs,
Salt and pepper.

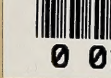
Make a white sauce of the milk, flour, and shortening. Add the flaked fish and stir until well blended. Remove from the fire and add the chopped pimentos and seasoning, and then fold in the egg whites, which have been beaten stiff and dry. Pour into a greased baking dish, and over the top sprinkle slightly stale bread crumbs which have been mixed with melted shortening. Place in a pan of hot water and bake in a moderate oven until firm and the crumbs delicately browned.

29. GROUPER POLENTA.

$\frac{1}{2}$ cup corn meal,
 $\frac{1}{3}$ cup cold water,
 $\frac{1}{2}$ teaspoon salt,
1 tablespoon chopped parsley,

2 cups boiling water,
 $\frac{1}{2}$ cup flaked grouper, previously
steamed,
1 teaspoon Worcestershire sauce.

Mix together the corn meal, salt, and cold water. Add to the boiling water. Cook 2 hours. Then stir in the flaked fish. Add the parsley, the Worcestershire sauce, salt, and pepper. Mix thoroughly; then pack into a greased baking powder can and cover and chill. When cold, unmold and cut into thin slices; flour and sauté. Or cut into slices and sprinkle each slice with grated cheese. Place the slices in a pan and pour over them a tomato sauce. Sprinkle grated cheese over the top and bake in the oven until the cheese melts.



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